APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/411,642	10/04/1999	GENE M. NITSCHKE	103045	8598

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7590 04/09/2003		THAI, CUONG T

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ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/411,642	GENE M. NITSCHKE
Examiner	Group Art Unit
CUONG T. THAI	2173

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE __THREE__ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL.**
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) _____1 – 21_____ is/(are) pending in the application.
- Of the above claim(s)_____ is/are withdrawn from consideration.
- ☐ Claim(s)_____ is/are allowed.
- ☒ Claim(s)_____1 – 21_____ is/(are) rejected.
- ☐ Claim(s)_____ is/are objected to.
- ☐ Claim(s)_____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on_____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on_____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).
    - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
    - ☐ received.
    - ☐ received in Application No. (Series Code/Serial Number)_____.
    - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).
    - *Certified copies not received:_____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). __5__
- ☒ Notice of Reference(s) Cited, PTO-892
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other_____

Office Action Summary

Part III   DETAILED ACTION

Specification

1.   Claims 1-21 are presented for examination.

2.   Applicant is reminded of the duty to fully disclose
information under 37 CFR 1.56.

3.   The Examiner have considered both Information Disclosure
Statement filed on Oct/04/1999 (Paper # 2) and Mar/02/2001 (Paper
5). However, Examiner only return PTO-1449 corresponding to
Mar/02/2001 along with this Action because there is no form PTO-
1449 for Oct/04/1999.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms
the basis for all obviousness rejections set forth in this Office
action:

> (a) A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the

differences between the subject matter sought to be patented and the prior
art are such that the subject matter as a whole would have been obvious at
the time the invention was made to a person having ordinary skill in the
art to which said subject matter pertains. Patentability shall not be
negatived by the manner in which the invention was made.

5.   Claims 1-3, 6, 9-14, 16 and 21 are rejected under 35 U.S.C.
103(a) as being unpatentable over Yair (USPN: 5,787,194) in view
of Goldberg (USPN: 6,341,183).

As per claims 1(system), 10(storage-medium), and 12(method);
Yair teaches a system that assembles a dedicated user interface
that allows an input segmented image to be manipulated
comprising:

a segmentation classification association circuit taht
associates a segmentation classifier and at least one segment of
the input segmented image is taught by Yair as the technique of
provides image processing apparatus for segmenting an input image
into image portions each containing a single character, the
apparatus comprising identification logic for identifying
connected components in the input image; classification logic for
determining into which of a number of predefined classes a
connected component falls (see column 2, lines 8-14);

Yair, however, does not disclose the limitation of an image
processing tool association circuit that determines at least one
image processing tool corresponding to the segmentation
classifier;

Goldberg discloses the limitation of an image processing
tool association circuit that determines at least one image
processing tool as the technique of an event-driven graphical
user interface (GUI)-based image acquisition interface for the
interactive data language programming environment developed by
Research Systems, Inc. (See column 2, lines 21-25) which include
Analysis Toobbox. Advantageously, a toolbox of various analytical
tools can be incorporated into the GUI-based image acquisition
interface (see column 8, lines 25-28);

It would have been obvious to one having ordinary skilled in
the art at the time the invention was made to include the
limitation of an image processing tool association circuit that
determines at least one image processing tool by Goldberg into
that of Yair's segment classifier invention. By doing so, the
system would enhance by providing real-time data analysis support
for images acquired during the alignment of image acquisition
analysis.

As per claims 2(system), 11(storage-medium), and 13(method);
Yair discloses the invention substantially as claimed. Yair,

however, does not disclose the limitation of a user interface assembly circuit that assemble at least one selectable interface widget into at least one user interface based on the at least one image processing tool corresponding to the segmentation classifier;

Goldberg discloses the limitation of a user interface assembly circuit that assemble at least one selectable interface widget into at least one user interface based on the at least one image processing tool as the technique of an event-driven graphical user interface (GUI)-based image acquisition interface for the interactive data language programming environment developed byResearch Systems, Inc. (See column 2, lines 21-25) whcih include Analysis Toobbox. Advantageously, a toolbox of various analytical tools can be incorporated into the GUI-based image acquisition interface (see column 8, lines 25-28) wherein the GUI interface program of the presentation provides the following features: pulldown menu, commonly used hardware binning options 14 are available, the available detector speeds 16 are available from a pulldown menu (see column 4, lines 22-31) and in order to switch qiuckly from one set of parameters to another, the user pushes only one button 28 (see column 4, lines 50-52);

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include the limitation of a user interface assembly circuit that assemble at

least one selectable interface widget into at least one user
interface based on the at least one image processing tool by
Goldberg into that of Yair's segment classifier invention. By
doing so, the system would enhance by providing better processing
tools in GUI-based interface to end users.

As per claims 3(system) and 14(method); Yair discloses the
invention substantially as claimed. Yair, however, does not
disclose the limitation of the system modifies the at least one
segment based on a selection of the at least one image processing
tool associated with the at least one user interface;

Goldberg discloses the limitation of the system modifies the
at least one segment based on a selection of the at least one
image processing tool associated with the at least one user
interface as the technique of Four tools are described herein.
They are the Fourier transform Aligment Tool, the Contrast Tool,
the Wavefront Tool, and the Zernike Polynomial Tool. It is not
difficult to modify the existing tools or add additional tools to
expand the capabilities of the toolbox (see column 8, lines 59-
63);

It would have been obvious to one having ordinary skilled in
the art at the time the invention was made to include the
limitation of modifying the at least one segment based on a
selection of the at least one image processing tool associated

with the at least one user interface by Goldberg into that of
Yair's segment classifier invention. By doing so, the system
would enhance by providing more varieties and selectable
processing tools in GUI-based interface to end user wherein the
user has capable of selecting tool based on his/her own desired
manner.

As per claims 9(system) and 21(method); Yair discloses the
invention substantially as claimed. Yair, however, does not
disclose the limitation of wherein the dedicated user interface
is a graphical user interface comprising <u>at least one</u> of drop-
down menu, a pull-down menu, a radio button, a tab button, a
segment display area or a slide bar;

Goldberg discloses the limitation of wherein the dedicated
user interface is a graphical user interface comprising at least
one of drop-down menu, a pull-down menu, a radio button, a tab
button, a segment display area or a slide bar as the technique of
the GUI interface program of the present invention provides the
following features: using a pulldown menu, commonly used hardware
binning options 14 are available (see column 4, lines 22-29),
⌗modes⌗ 26 selected by buttons 28(see column 4, lines 45-46),
large ⌗GO⌗ and ⌗STOP⌗ buttons (see column 5, line 11), the image
size can be scaed for display from 1/4 th size to 8 times large
in multiples of 1/4 size using a scroll-bar, or slide 112 (see

column 5, lines 63-65), and using the pull-down menu 508 at the top of the toolbox window, the direction of the data stripe used to access contrast can be set to vertical or horizontal (see column 9, lines 62-64);

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include the limitation of wherein the dedicated user interface is a graphical user interface comprising at least one of drop-down menu, a pull-down menu, a radio button, a tab button, a segment display area or a slide bar by Goldberg into that of Yair's segment classifier invention. By doing so, the system would enhance by providing more selectable tools in GUI-based interface to end user wherein the user has capable of selecting tool based on his/her own desired manner.

As per claims 6(system) and 16(method), the limitation of s segmentation selection circuit that selects the at least one segment is taught by Yair as the technique of identifying connected components in the input image; classifying the connected components by determining into which of a number of predefined classes a connected components falls, at least one of said classes indicating that the connected component is most likely to be single character; and iteratively merging and slitting the connected components and reclassifying the resulting

slit and/or merged connected components until an image

segmentation is achieved which meets a predefined criterion (see

column 3, lines 42-50). These claims are therefore rejected for

the reason as set forth aboved.

6.   Claims 4-5, 15 and 20 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Yair (USPN: 5,787,194) in view of

Goldberg (USPN: 6,341,183) and further in view of Marimont et al.

(USPN: 5,710,877) hereinafter Marimont.

As per claims 4(system) and 15(method), Yair-Goldberg

disclose the invention substantially as claimed. Yair-Goldberg,

however, do not disclose the limitation of a segmentation mapping

circuit that determines the at least one segment based on a

position of a user input device in the input segmented image;

Marimont discloses the limitation of a segmentation mapping

circuit that determines the at least one segment based on a

position of a user input device in the input segmented image as

the technique of the discovery of a data structure representation

of an image called an image structure map (ISM) that accurately

and explicitly represents the geometric and topological

properties of an image and allows for efficient and accurate

spatial indexing of regions of an image (see column 3, lines 9-

14). Marimont's image structure map (ISM) invention further

discloses ※input signal circuitry※ is circuitry for providing

input signals to the processor from an input signal source. The

input signal source may be directed by a human user or by an

automatic operation under control of a processor. ※User input

circuitry※ is circuitry for providing signals based on action of

a user. User input circuitry can receive signals from one or more

※user input devices※ that provide signals based on actions of a

user, such as a keyboard, a mouse, or stylus device (see column

9, lines 53-61)..For example, a signal from a user input device

indicates a position of an image if the signal includes data from

which the position can be uniquely identified (see column 10,

lines 4-6);

It would have been obvious to one having ordinary skilled in

the art at the time the invention was made to include the

limitation of a segmentation mapping circuit that determines the

at least one segment based on a position of a user input device

in the input segmented image by Marimont into that of Yair-

Goldberg combined invention. By doing so, the system would

enhance by permitting user interaction with the structures in an

origional image through image structure mapping.

As per claims 5(system) and 20(method), Yair-Goldberg

disclose the invention substantially as claimed. Yair-Goldberg,

however, do not disclose the limitation of the segment mapping

circuit highlights the at least one segment based on the position of a user input device;

Marimont discloses the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device as the technique of the method comprises receiving an image interaction signal from the input circuitry indicating an image interaction request from a user to modify an image structure map data structure, referred to as in an image structure map, that spatial indexes a displayed origional image. The displayed origional image represents an origional image data structure, referred to as an origional image, having image locations therein specified according to a first coordinate system (see column 5, lines 5-13);

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include the limitation of the segment mapping circuit highlights the at least one segment based on the position of a user input device by Marimont into that of Yair-Goldberg combined invention. By doing so, the system would enhance by signaling the user to known where is the location of the image structure map from which user will interact with.

7.   Claims 7 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yair (USPN: 5,787,194) in view of

Goldberg (USPN: 6,341,183) and further in view of Lee et al.
(USPN: 6,026,182) hereinafter Lee.

As per claims 7(system) and 17(method), Yair-Goldberg
disclose the invention substantially as claimed. Yair-Goldberg,
however, do not disclose the limitation of image processing tool
association determines the <u>at least one of</u> predefined
configuration association data, updatable configuration
association data or user configuration association data;

Lee discloses the limitation of predefined configuration
association data as the technique of precomression extrapolation
method for extrapolating image features of arbitary configuration
to a predefined configuration (see column 22, lines 47-48);

It would have been obvious to one having ordinary skilled in
the art at the time the invention was made to include the
limitation of predefined configuration association data by
Marimont into that of Goldberg image processing tool and further
into that of Yair-Goldberg combined invention. By doing so, the
system would enhance by providing predefined configuration tool
which available to image processing toolbox to end user.

As per claim 18, due to the similarity of this claim to that of claim 17, this claim is therefore rejected for the same reason applied to claim 17.

8.   Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yair (USPN: 5,787,194) in view of Goldberg (USPN: 6,341,183) and further in view of Mahoney (USPN: 6,009,196).

As per claims 8(system) and 19(method), Yair-Goldberg disclose the invention substantially as claimed. Yair-Goldberg, however, do not disclose the limitation of segmentation classifier corresponds to <u>at least one</u> of a photographic region, a half-tone region, a text region, a line art region, a black and white region or a color region;

Mahoney discloses the missing limitation of a text region as the technique of analyzing image data, and more particular to the analysis of image data representing images containing text to classify the types of non-running text regions therein without the need for predefining structure within the image. The invention first employs the characteristics of running text regions to distinguish them from non-running text regions in a page image (see column 1, lines 22-29);

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include the limitation of a text region (running text region and non-running text region) by Mahoney into that of Yair-Goldberg combined invention. By doing so, the system would enhance by providing more enhanced classifier tools to end user.

Conclusion

9. The prior art made of record and relied upon is considered pertinent to applicant's disclosure.

10. A shortened statutory period for response to this action is set to expired THREE (3) months, ZERO days from the date of this letter. Failure to respond within the period for response will cause the application to be abandoned. 35 U.S.C. 133.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cuong T. Thai whose telephone number is 703-308-7234. The examiner can normally be reached on Monday-Friday from 7:30 AM to 4:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Any response to this action should be mailed to:

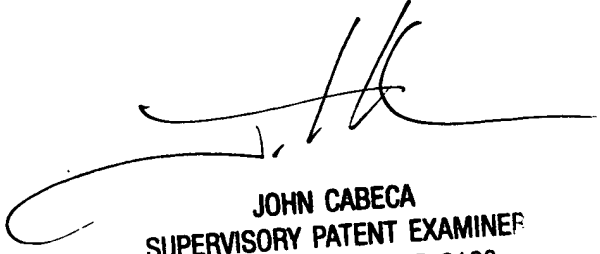Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

Or:

(703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

JOHN CABECA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Cuong T.Thai

February 22, 2002